Comment number

Comments

Responses

STATEMENT OF RICHARD O. HEGG

Clemson University

College of Agricultural Sciences Department of Agricultural Engineering

May 14, 1986

Mr. R. P. Whitfield, Director Environmental Division US-DOE, SRP Office P.O. Box A Aiken, SC 29802

Dear Mr. Whitfield;

AS-1

I am writing to request that DOE-SRP evaluate the feasibility of using the cooling water from the C and K reactors for agricultural purposes. After discussions with several persons at Clemson University, DOE in Washington, S.C. Commissioner of Agriculture, and others, it certainly seems worth making an evaluation to assess the legal, technical, and economic feasibility of such a project. S.C. agriculture is very depressed presently and will probably continue to be so in the near future. This resource (400,000 gpm of warm water) could be used by agriculture to increase crop yields or make it possible to grow alternative crops that will give a higher net return to the farmers.

There are many factors that need to be considered. Legal aspects such as land application of water which may contain some radioactive contamination, SCDHEC requirement that water be cooled to $90^{\circ}\mathrm{F}$ or within 5° of ambient at the plant, consumptive use, and interbasin transfer of water for irrigation,

DOE prepared a new appendix in this EIS (Appendix I) to address the feasibility of using the cooling water discharges from K-and C-Reactors for agricultural and aquacultural uses, industrial applications, direct power generation, and ethanol production.

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etc. have to be addressed. It is also necessary to evaluate the effects of the reactors being periodically shut down. This will impact the types of crops grown and whether a backup irrigation water supply is needed. During winter some other use, such as greenhouses or aquaculture, may be an ideal way to utilize the water.

A major assessment of social and economic factors involved will be needed. If such a source of water is made available to agriculture, an organization would need to be formed to distribute, maintain, operate, allocate water, etc. for the system. Makeup and operation of such an organization would have to be developed with input from Federal, state, and county officials and the ultimate user, the farmer.

The cost of constructing various phases of such a project would have to be estimated. Costs would include distribution canals or pipes, pumps, meters, roads, bridges, etc. The environmental impacts on crops, soil, wildlife, surface and groundwater would also need to be evaluated.

The above items are a few of many that need to be included in such a feasibility study. Due to the size of the resource (cooling waer) and the needs of S.C. agriculture, I feel a study should be made and estimate the cost of a 6-9 month study at approximately \$150,000. This should be done by

Table J-2. DOE responses to comments on Draft EIS (continued)

Comment number	Comments	Responses
	DOE-SRP as part of the EIS with input from Clemson scientists in the College of Agricultural Sciences and other state agencies.	
	Sincerely,	
	Richard O. Hegg, Head Agricultural Engineering Department	
	lw	
	xc: Lee Thomas, Administrator, US-EPA L. P. Anderson, Dean, College of Agriculture, Clemson University Admiral Foley, DOE, Washington, DC Les Tindal, S.C. Commissioner of Agriculture Senator Strom Thurmond Senator Ernest Hollings Representative Carroll Campbell Representative Butler Derrick	